

Species

23(72), 2022

To Cite:

Karuppusamy S, Yadav BSP, Richard SSP *Duabanga grandiflora* (Roxb. ex DC.) Walp. (Lythraceae) – a new addition to the tree flora of Tamil Nadu. *Species*, 2022, 23(72), 337-340

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Peer-Review History

Received: 27 April 2022

Reviewed & Revised: 29/April/2022 to 02/July/2022

Accepted: 03 July 2022

Published: 05 July 2022

Peer-Review Model

External peer-review was done through double-blind method.



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Duabanga grandiflora (Roxb. ex DC.) Walp. (Lythraceae) – a new addition to the tree flora of Tamil Nadu

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ABSTRACT

The occurrence of *Duabanga grandiflora* (Roxb. ex DC.) Walp., a large handsome tree is reported from tea estates of Valparai, Coimbatore district, Tamil Nadu state first time. It is new addition to the tree flora of Tamil Nadu. Diagnostic morphological features, notes on phenology, distributional ranges and field photographs are provided here for better understanding of the tree species.

Key words: *Duabanga grandiflora*, forest tree, new record, Tamil Nadu.

1. INTRODUCTION

Flowering plant family Lythraceae *s.l.* includes Punicaceae, Sonneratiaceae, and Trapaceae representing with 28 genera and 500 species largely in tropical world with a few temperate species (Mabberley, 2018; POWO, 2022). In India, the family has represented 11 genera and 53 species (Karthikeyan, 2000). The genus *Duabanga* belonging to the family Lythraceae consist of only three species, viz., *Duabanga grandiflora* (Roxb. ex DC.) Walp. (syn. *Duabanga sonneratiodes* (Buch-Ham.), *D. moluccana*. and *D. taylorii* Jayv. (Jayveera, 1967). *D. grandiflora* distributed in tropical forest of northeast India, Andaman Islands, Burma and Malaysia. The distribution of *D. grandiflora* is only known from northeast India, and in South India listed as an ornamental tree in Flora of Mahabaleswar and adjoining Maharashtra and Flora of Anshi National Park, Western Ghats of Karnataka (Deshpande *et al.* 1993; Puneekar and Lakshminarasimhan, 2011). Tamil Nadu state is lying between 8° 7' and 13° 35' N and 76° 15' and 88° 20'E and covers about 1,30,058 sq.km. The richness of the flora, Tamil Nadu stands first in all among the Indian states in the country with 6723 flowering plant species. It includes 533 endemic species, 230 red listed species, 1559 medicinal plants species and 260 wild relatives of cultivated plant species (TNF, 2013; Narasimhan and Irwin, 2020). Intensive and extensive floristic surveys conducted in Tamil Nadu state, the authors collected an interesting tree species from Valparai area of Coimbatore district. The voucher specimens have been collected and preserved in the herbarium of

the Madura College (Sri Ganesan Herbarium [SGH], Department of Botany, The Madura College, Madurai). The collected specimens were critically examined based on Floras, Monographs and research articles (Jayveera, 1967; Deshpande *et al.*, 1993; Puneekar and Lakshminarasimhan, 2011) and identified as *Duabanga grandiflora* (Roxb. ex DC.) Walp. Perusal of literature revealed that the collected tree species previously not reported from Tamil Nadu state (Nayar *et al.*, 1989; Matthew 1999; Nayar *et al.*, 2014; Narasimhan and Irwin, 2020). Herewith *Duabanga grandiflora* is reported for the first time from the Valparai of Tamil Nadu and added to the tree flora of Tamil Nadu with colored photographs, detailed description, distributional range and phenology.

2. TAXONOMIC TREATMENT

Duabanga grandiflora (Roxburgh ex Candolle) Walpers, Repert. Bot. Syst. 2: 114. 1843. *Lagerstroemia grandiflora* Roxburgh ex Candolle, Mém. Soc. Hist. Nat. Genève 32: 84. 1826; *Duabanga sonneratioides* Buchanan-Hamilton, Trans. Linn. Soc. London 17: 177 (1835). (Figure 1).

Botanical description: Large tree, up to 50 m tall; branches pendulous, glabrous throughout. Leaves rigid, distichous, lamina abaxially pale green, adaxially dark green, ovate to oblong-elliptic, broad, 11-15.5 × 4-7.5 cm, abaxially glaucous, margin entire, lateral veins 20-24 pairs, base cordate, apex shortly acuminate; petiole stout, 1.3 cm long. Corymbs 3-20-flowered, drooping at terminal branches. Flower 5-6 cm across, greenish whiter, pedicels 3-4 cm, stout. Floral tube broadly campanulate, 1.6-2.5 × 1.8-3 cm; sepals 5-6, green, thick fleshy, ovate, acuminate, enlarged in fruit. Petals 6, dull white, membranous, obovate, 2.5-3 × 1.5-2 cm, margin undulated. Stamens numerous, ca. 50 or more, white, surpassing petals, anthers characteristically curved. Ovary subglobose, 2.5-3 cm across, style cylindrical, elongated up to 5 cm long, stigma capitate. Capsules subglobose, 3-4 × 4-4.5 cm, 6-9-valved. Seeds 4-6 mm long, brownish, smooth.

Specimen examined: Tamil Nadu, Coimbatore district, Valparai, on the way to Kallar, near Uppasi, 10-05-2019. S. Karuppusamy 1466 (SGH).

Flowering & Fruiting: December-May.

Distribution: Native to north east India, Andaman Islands, Karnataka, Maharashtra (India), Burma, Malaysia, Nepal and Southern China.

Ecology: *Duabanga grandiflora* is observed along the road side and inside the tea plantations at Valparai estates. It may be planted during the British time for avenue and shade tree in tea plots but now extended their range in forests of Analamalais due to their overproduction of seeds. About 27 lofty trees were identified along the road side forests and plantations. They usually associated with some other trees like *Lagerstroemia parviflora*, *Bhesa indica*, *Cinchona officinalis*, *Mallotus tetracoccus*, *Syzygium caryophyllatum*, etc.

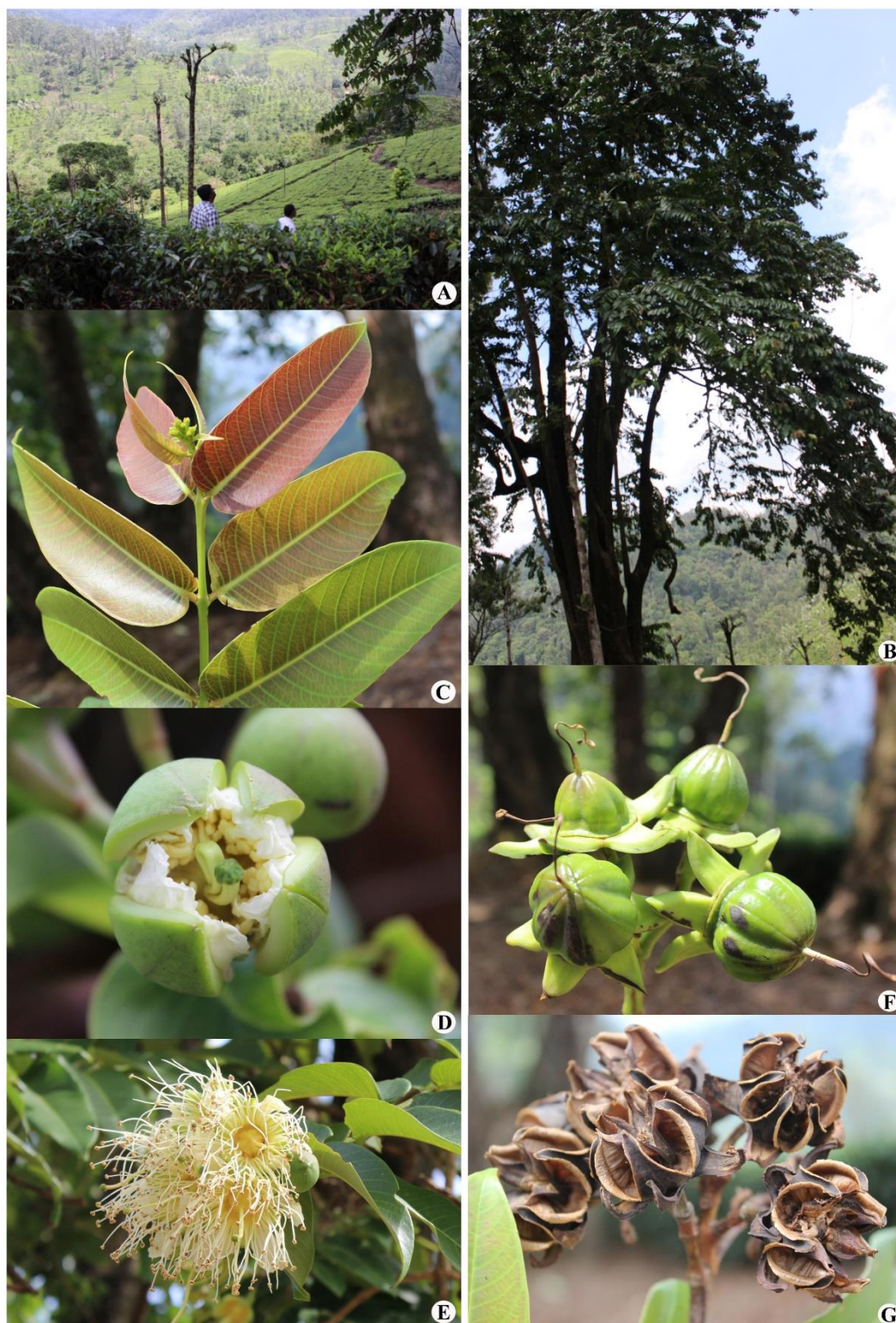


Figure: 1. *Duabanga grandiflora* A. Habitat; B. Habit; C. Leaf; D. Opening bud; E. Flower; F. Fruit; G. Dehiscid capsule

Acknowledgement:

The authors are thankful to the Head office, Botanical Survey of India, southern circle, Coimbatore for permitting to consult the Herbarium and Library. First author thanks to the management of the Madura College board for proving seed money by small research grant to promote the research.

Author's contribution:

All authors have contributed equally to the manuscript.

Ethical approval

Duabanga grandiflora (Roxb. ex DC.) Walp., was reported from tea estates of Valparai, Coimbatore district, Tamil Nadu, India. The ethical guidelines for plants & plant materials are followed in the study for sample collection & identification. Head office, Botanical Survey of India, southern circle, Coimbatore was granted permission to consult the Herbarium and Library.

Funding

This study has not received any external funding.

Conflicts of interests

The authors declare that there are no conflicts of interests.

Data and materials availability

All data associated with this study are present in the paper.

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